

***GOM Alliance Nutrient Criteria  
Conference  
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# Current nutrient controls

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- narrative criteria
- watershed rules
- antidegradation policy
- screening of phosphorus, nitrogen, and chlorophyll *a* monitoring data

# Nutrient Criteria Plan

November 3, 2006

## Order of development

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- Reservoirs
  - Large pool of data
- Streams and rivers
  - Large pool of data, but no attached algal data
- Estuaries
- Wetlands
- Plan under EPA review

# Reservoirs

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- Used historical data, 1970 – April 31, 2003
- Stations in deep pool of reservoirs
- Surface values only
- Chlorophyll *a* & total phosphorus (TP) and TN (limited data) in water column

# Work to date

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- Contract with USGS
  - Reservoirs
    - EPA method – Chlorophyll *a* & total phosphorus
      - Aggregate ecoregion
      - Level III ecoregion
      - Individual reservoir
    - Calculation of criteria – chlorophyll *a* & TP
      - Pooled 2-sample *t*-test
      - Individual reservoirs
      - Reference reservoirs based on land use (10% of less ag + urban, and no major >1MGD discharge)
      - All reservoirs with sufficient data

# Reservoirs cont'd

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- Data analysis – just received
  - PCA
  - Multivariate
  - Regression

# Streams and Rivers

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- Received previously
  - EPA method
- Due in the next month or so
  - Criteria calculation using pooled 2-sample t-test
  - Data analysis similar to reservoirs
- Compare to EPA method

# Estuaries – future plans

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- Data base creation
  - Historical ambient data
  - Completed studies
- Evaluate EPA's approach and national criteria
- Consider preliminary criteria based on historical ambient nutrient and chlorophyll *a* concentrations



# Estuaries cont'd

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- Analyze available data to try to elucidate the relationship between nutrients and phytoplankton occurrence
- Consider the results of evaluations of the effects of freshwater inflows and associated nutrients to Texas estuaries
- Consider the role of nutrients in excessive blooms of phytoplankton
- Increase analysis of individual estuary systems to evaluate a sufficient range of criteria options
- Define data gaps and needs

# Website address

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- tceq.state.tx.us
- Nutrient criteria development
  - [http://www.tceq.state.tx.us/permitting/water\\_quality/wq\\_assessment/standards/WQ\\_standards\\_nutrient\\_criteria.html](http://www.tceq.state.tx.us/permitting/water_quality/wq_assessment/standards/WQ_standards_nutrient_criteria.html) or
    - Go to **WATER**
    - Go to
      - **SURFACE WATER QUALITY STANDARDS**
    - Go to **NUTRIENT CRITERIA DEVELOPMENT**

# Contacts

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